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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,548	03/17/2004	Shigeo Terabe	04329.3276	3483

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EXAMINER	
FLORES, LEON	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
10/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/801,548	TERABE, SHIGEO	
	Examiner	Art Unit	
	Leon Flores	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 & 10, the further limitation of, "fails to be in cooperation" makes the claim indefinite b/c the examiner does not comprehend what the applicant is trying to contemplate with this limitation.

In claims 7 & 11, the further limitation of, "fails to be in cooperation" and "which is in cooperation" makes the claim indefinite b/c of the same reasons described above. For the purpose of art considerations on its merits, claims 1, 7 & 10-11 will be given its broadest reasonable interpretation.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims (1, 3, 5-6, 10 & 12-14) are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiramatsu (US Publication 2004/0146089 A1)**

Re claim 1, Hiramatsu discloses a communication system which executes data communication of a parallel combinatory spread spectrum scheme between a transmitter and a receiver, the transmitter comprising: a first transmission unit configured to transmit, to the receiver, the first physical layer control information by selected spreading-code data of the parallel combinatory spread spectrum scheme (See fig. 1 & paragraphs 33-43, especially paragraphs 38 & 43), and the receiver comprising: a first receiving unit configured to receive the first physical layer control information by the selected spreading-code data of the parallel combinatory spread spectrum scheme (See fig. 2 & paragraphs 33-43, especially paragraphs 38 & 43).

But the reference of Hiramatsu fails to explicitly teach an acquiring unit configured to acquire radio channel quality information by measuring a radio channel quality when the transmitter receives a signal; an information generation unit configured

to generate first physical layer control information for control of a physical layer based on the radio channel quality information at a first control timing which fails to be in cooperation with a dedicated channel for the control of the physical layer; and

a physical layer control unit configured to control the physical layer between the receiver and the transmitter based on the first physical layer control information.

However, the reference of Hiramatsu does suggest that the transmission rate can be increased by use of a parallel combination of spread codes. Furthermore, one skilled in the art would know that the channel quality (SIR) must be computed and monitored in order to adjust the transmission rate in a communication system.

Therefore, it would have been obvious to one of ordinary skills in the art to have incorporated these features into the system of Hiramatsu, in the manner as claimed, for the benefit of optimizing the communication path between a transmitter and a receiver.

Re claim 3, the reference of Hiramatsu further discloses that wherein the information generation unit generates the first physical layer control information in correspondence with the radio channel quality information.

Re claim 5, the reference of Hiramatsu further discloses that wherein the physical layer control unit sets, based on the first physical layer control information, a transmission data rate of data to be transmitted to the transmitter. (See fig. 2 & paragraphs 33-43, especially paragraphs 38 & 43)

Re claim 6, the reference of Hiramatsu further discloses that wherein the receiver further comprises a transmission unit configured to transmit, to the transmitter, the data which is set to the transmission data rate and spread by a spread spectrum scheme. (See fig. 2 & paragraphs 33-43, especially paragraphs 38 & 43)

Claim 10 has been analyzed and rejected w/r to claim 1 above.

Claim 12 has been analyzed and rejected w/r to claim 1 above.

Re claim 13, the reference of Hiramatsu further discloses that a second receiving unit configured to receive second physical layer control information for the control of the physical layer over a dedicated channel, wherein the physical layer control unit controls the physical layer between the receiver and the transmitter based on the first physical layer control information and the second physical layer control information. (One skilled in the art would know that if the SIR does not change the power control does not change either. However, if the SIR changes the power/rate will also change in order to provide quality to the user. Furthermore, the system of Hiramatsu also provides rate control by using the parallel combinatory scheme.)

Re claim 14, the reference of Hiramatsu further discloses that wherein the physical layer control unit sets, based on the first physical layer control information and the second physical layer control information, a transmission data rate of data to be transmitted to the transmitter. (One skilled in the art would know that if the SIR does not

change the power control does not change either. However, if the SIR changes the power/rate will also change in order to provide quality to the user. Furthermore, the system of Hiramatsu also provides rate control by using the parallel combinatory scheme.)

6. **Claims (2 & 4) are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiramatsu (US Publication 2004/0146089 A1), as applied to claim 1 above, and further in view of Miyoshi et al. (hereinafter Miyoshi) (US Patent 6,847,828 B2)**

Re claim 2, the reference of Hiramatsu fails to explicitly teach that wherein if the radio channel quality measured in generating the first physical layer control information is higher than radio channel quality at an immediately preceding timing, the information generation unit generates the first physical layer control information which increases the control of the physical layer by a unit control amount, and if the radio channel quality measured in generating the first physical layer control information is poorer than the radio channel quality at the immediately preceding timing, the information generation unit generates the first physical layer control information which decreases the control of the physical layer by the unit control amount.

However, Miyoshi does. (See fig. 4 & col. 2, line – col. 30) Miyoshi discloses a system for controlling/adjusting the power in a mobile/base station by computing the SIR. One skilled in the art would know that there exists a constant communication between the base and mobile stations in order to provide the user the best quality

service. And one way to achieve this, is by computing the channel quality (SIR) at every moment in time and by adjusting the power/rate.

Therefore, taking the combined teachings of Hiramatsu and Miyoshi as a whole. It would have been obvious to one of ordinary skills in the art to have incorporated this feature into the system of Hiramatsu, in the manner as claimed and as taught by Miyoshi, for the benefit of optimizing the communication link between the base station and the mobile station.

Re claim 4, the combination of Hiramatsu and Miyoshi further discloses that wherein the acquiring unit acquires, as the radio channel quality information, SIR (Signal-to-Interference Ratio) information which is obtained by measuring a receiving power of a common pilot signal transmitted from the receiver to the transmitter. (In Miyoshi, see fig. 4 & col. 2, line – col. 30)

Allowable Subject Matter

7. Claims 7 & 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Flores whose telephone number is 571-270-1201. The examiner can normally be reached on Mon-Fri 7-5pm ,Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LF
September 28, 2007

DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER